

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A projection-type display apparatus comprising:
a light source;
a liquid crystal light valve for modulating light emitted from the light source by turning a light polarization plane of the light;
a projection lens for projecting the light modulated by the liquid crystal light valve onto a projection surface; and
a pivotable light polarizer arranged between the light source and the liquid crystal light valve; and
a drive control unit for pivoting the pivotable polarizer with respect to the light axis,
wherein the pivotable polarizer adjusts the intensity of a polarization component
according to a pivotal angle.

2. (Original) A projection-type display apparatus as recited in claim 1, further comprising a polarization-conversion element arranged between the light source and the light polarizer, for emitting light after orientating the polarization plane of the light emitted from the light source into a single direction.

3. (Previously Presented) A projection-type display apparatus as recited in claim 2, further comprising:

a first lens array including a plurality of lenses, arranged between the light source and the polarization-conversion element, for splitting light emitted from the light source into a plurality of partial beams; and

a second lens array including a plurality of lenses, arranged between the first lens and the polarization-conversion element, for approximately condensing onto the polarization-conversion element for the plurality of partial beams split by the first lens array.

4. (Previously Presented) A projection-type display apparatus as recited in claim 2, further comprising:

a light guide, arranged between the light source and the polarization-conversion element, having an incident end for receiving light emitted from the light source, and an emitting end for emitting the light as a planar light source; and

a lens system, arranged between the light guide and the polarization-conversion element, for approximately condensing onto the polarization-conversion element light emitted from the emitting end of the light guide.

5. (Original) A projection-type display apparatus as recited in claim 2, wherein the light polarizer is arranged in the vicinity of the polarization-conversion element.

6. (Original) A projection-type display apparatus as recited in claim 1, further comprising:

a color separator arranged between the light source and the liquid crystal light valve, for trichromatically separating light from the light source into red, green and blue light; and

a color composition unit arranged between the liquid crystal light valve and the projection lens, for composing the three colors of light modulated by the liquid crystal light valve;

wherein the light polarizer is arranged between the color separator and the liquid crystal light valve in a light path of at least one of the three colors of light emitted from the color separator.

7. (Original) A projection-type display apparatus as recited in claim 1, wherein the light polarizer is a grid polarizer comprising a base material made of a dielectric in parallel-plate form, and a plurality of thin linear elements arranged on the surface of the base material at a predetermined spacing from each other.

8. (Original) A projection-type display apparatus as recited in claim 1, further comprising:

a polarizer driving unit for driving the light polarizer;
an average-value detector for detecting from an input image signal, and outputting to the polarizer driving unit, average luminance value in a frame;
a peak-luminance detector for detecting from said input image signal, and outputting to the polarizer driving unit, peak luminance value in said frame;
a liquid crystal driving unit for driving the liquid crystal light valve; and

a determination unit for determining from said average and said peak luminance values frame-by-frame whether to alter luminance value, and outputting the determination results to the liquid crystal driving unit;

wherein the polarizer driving unit determines pivotal angle for and drives the light polarized based on said average and said peak luminance values, and the liquid crystal driving unit drives the liquid crystal light valve based on said determination results.

9. (Previously Presented) A projection-type display apparatus as recited in claim 1, the light source comprising a light source unit, wherein the light source unit includes a lamp and a concave mirror, wherein the lamp is a halogen lamp, a xenon lamp, a metal halide lamp, or a ultra-high pressure mercury lamp, wherein the concave mirror or a ellipsoidal mirror.

10. (Previously Presented) A projection-type display apparatus as recited in claim 4, the light guide is columnar.

11. (Previously Presented) A projection-type display apparatus as recited in claim 4, the light guide is rectangular.

12. (Previously Presented) A projection-type display apparatus as recited in claim 1 further comprising,

a color separator arranged between the light source and the liquid crystal display light valve, for trichromatically separating light from the light source into red, green and blue light; and

wherein the pivotable polarizer is provided between the light source and the color separator.

13. (Previously Presented) A projection-type display apparatus as recited in claim 6, wherein the light source is a mercury-lighting based lamp, and wherein the pivotable polarizer is arranged in a light path of the green light.

14. (Previously Presented) A projection-type display apparatus as recited in claim 1, wherein the pivotable light polarizer is a transmission-type polarizer or a deflection polarizer.

15. (Currently Amended) A projection-type display apparatus as recited in claim 1 further comprising a drive control unit for pivoting the pivotable polarizer with respect to the light axis;

wherein the pivotable polarizer adjusts the intensity of S-polarization component or the intensity of P-polarization component according to the pivotal angle.

16. (Previously Presented) A projection-type display apparatus as recited in claim 1,
wherein the pivotal angle is zero when the intensity is maximum, and
wherein the pivotable polarizer has a characteristic such that the intensity decrease in
proportion to $\cos\theta$, where θ is the pivotal angle.